

KEYSPAN ENERGY DELIVERY NEW ENGLAND
D.T.E. 05-68

SECOND SET OF INFORMATION REQUESTS OF THE
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY TO
KEYSPAN ENERGY DELIVERY NEW ENGLAND

D.T.E. 2-28

Date: February 14, 2006

Respondent: Theodore Poe, Jr.

- Q. Refer to page 47 of the Company's filing. Please explain how the Company developed the normalized daily sendout requirements using the linear regression equations.
- A. To develop a forecast of its customers' sendout requirements over the forecast period under normal weather conditions, the Company employs the first three of its five-step forecasting methodology (which are described on pages 7-8 of the Company's filing):
- 1) Forecast incremental sendout
 - 2) Develop reference year sendout using regression equations
 - 3) Normalize forecast of customer requirements

In order to characterize expected customer requirements under normal weather conditions, the Company:

- a) Develops reliable mathematical equations relating its actual observed customers' requirements (dependent variable) to actual observed weather conditions (independent variable) for the most recent, historical time period available,
- b) Develops a definition of normal weather conditions matching the weather conditions described by the independent variable in (a),
- c) Applies the normal weather variable developed in (b) to the mathematical equations developed in (a) to characterize its customers' requirements for the most recent, historical time period had normal weather occurred, and,
- d) Adds to (c) the expected additional sendout requirements for future years due to net load additions on the Company's system of customers requiring utility supply and/or transportation capacity.

As an example, January 12th is assumed to be a weekday. Its normal year EDD value is 48, and the day prior EDD value is 46. Using the regression equation form and coefficients described in Charts III-C-1 and III-C-2 in the Company's filing, the 'springboard' firm sendout requirement ('FSO0304') for the Boston division would be calculated to be:

$$\text{FSO0304} = \text{Base Load} + (\text{Jan } 12^{\text{th}} \text{ EDD} * \text{Jan coefficient}) + (\text{day prior EDD} * \text{Lagged EDD coefficient})$$

$$\text{FSO0304} = 63233.2 + (48 * 8745.3) + (46 * 1639.4) = 558,420 \text{ MMBtu}$$

The cumulative base case annual net load additions for the Boston division, to get to the forecast year of 2005-06 are 3,663,731 MMBtu/year. This can be divided into 3,088,487 MMBtu of temperature-sensitive load and 575,244 MMBtu of base load. Dividing 3,088,487 MMBtus by the total number of EDD in a normal year (6,458 EDD) and multiplying by 48 EDD (for Jan 12th's share) yields 22,955 MMBtu of incremental temperature-sensitive load. Dividing 575,244 MMBtus by 365 yields 1,576 MMBtu/day of incremental base load. Thus, the forecasted value of sendout for the Boston division for Jan 12th of the base case normal year 2005-06 would then be the sum:

$$\text{FSO0506} = 558,420 + 22,955 + 1,576 = 582,951 \text{ MMBtu}$$

This same methodology is applied for the four KeySpan divisions over the forecast period to develop normalized daily sendout requirements, as presented in the Company's filing.